

**WHAT IS CLAIMED IS:**

1. A method of generating Digital Item for electronic commerce activities of multimedia data, comprising the steps of:

5        selecting resource for electronic commerce activities of multimedia data; and

generating Digital Item as the unit of manipulation of electronic commerce activities for a corresponding multimedia resource defined by including anchor for designating a selected resource, descriptor for describing a corresponding item, and opCondition for describing operational use conditions of the corresponding item.

10      2. The method according to claim 1, wherein the step of generating Digital Item as the unit of manipulation of electronic commerce activities for a corresponding multimedia resource is defined to include selectively murCondition for describing conditions related to commercial management and use rule for the corresponding item, eventReport for describing event to be reported in connection with the corresponding item, userPreference for describing user preference information on the corresponding item, or reservedMetadata for describing metadata additionally required for Digital Item definition model in the future.

15      3. The method according to claim 1, wherein the Digital Item consists of the lowest atomic Digital Item which is not divided into any longer and packaged Digital Item, wherein the packaged Digital Item is defined to include any sub packaged Digital Item in a recurrent package form that the atomic Digital Items are packaged or already packaged Digital Items are again packaged, therefore each packaged Digital Item is generated in a recursive manner.

4. The method according to claim 3, wherein the packaged Digital Item is defined to include information (anchor) for designating same level of Digital Item or information (anchor) for designating lower level of Digital Item.

5        5. The method according to claim 3, wherein in order to construct the recurrent layered structure, the atomic Digital Item as the lowest layer is defined as **component**, packaged Digital Item as the middle layer including the component or any sub packaged Digital Item is defined as **item**, and packaged Digital Item as the highest layer including item or any sub container is defined as **container**.

10            6. The method according to claim 3, wherein in order to construct the recurrent layered structure, the atomic Digital Item as the lowest layer is defined as **component**, packaged Digital Item as the middle layer including the component or any sub packaged Digital Item or information (anchor) for designating that is defined as **item**, and packaged Digital Item as the highest layer including item or any sub container or information (anchor) for designating that is defined as **container**.

15            7. A method of generating Digital Item for electronic commerce activities of multimedia data, comprising the steps of:

20            selecting resource for electronic commerce activities of multimedia data;

generating **component** defined to include a selected resource, anchor for designating the selected resource, descriptor for describing details of the resource, opCondition for describing operational use conditions of the resource ;

25            generating **item** defined to include packaged content including at least one

component or item or anchor for designating that, choice for the packaged content,

descriptor for describing details of the packaged content ; and

generating **container** defined to include packaged content including at least one item or container or anchor for designating that, descriptor for describing details of the packaged content.

5

8. The method according to claim 7, wherein the step of generating **component** is defined to include selectively murCondition for describing conditions related to management and use rule for the resource, eventReport for describing event to be reported in connection with the resource, userPreference for describing user preference information on the resource, or reservedMetadata for describing metadata additionally required for Digital Item definition model in the future.

9. The method according to claim 7, wherein the step of generating **item** is defined to include selectively murCondition for describing conditions related to management and use rule for the package content, eventReport for describing event to be reported in connection with the package content, userPreference for describing user preference information on the package content, or reservedMetadata for describing metadata additionally required for Digital Item definition model in the future.

20

10. The method according to claim 7, wherein the step of generating **container** is defined to include selectively murCondition for describing conditions related to management and use rule for the package content, eventReport for describing event to be reported in connection with the package content, userPreference for describing user preference information on the package content, or reservedMetadata for describing metadata additionally required for Digital Item definition model in the future.

25

11. The method according to claim 7, wherein the choice is defined to include  
recurrent form of at least zero(0) or more choice, at least zero(0) or more descriptor, at  
least zero(0) or more opCondition that can be used to determine whether a single  
selection is selected or more than one selection are selected, and at least one(1) or more  
selection as the object of selection.

12. The method according to claim 11, wherein the selection is defined to include  
predicate which is Boolean function representation language, at least zero(0) or more  
descriptor for describing the content of the selection, and opCondition for describing  
operational use conditions of the selection, as elements included to define the choice.

13. The method according to claim 7, wherein the choice is used for item level  
for the purpose of selective item configuration in order to adapt the Digital Item  
according to the various types of networks and terminals, or the user request, and wherein  
the choice is modeled in a recurrent form considering the user generally configures item  
through multi-steps, so layered definition of choice is required.

14. The method according to claim 7, wherein descriptor used for all the Digital  
Items, choice, selection, eventReport, userPreference, reservedMetadata, and anchor, is  
defined to include at least zero(0) or more existing descriptor or anchor, component  
capable of representing the content of descriptor or statement of text or any machine  
readable format for describing the content such as parent elements of descriptor to be  
defined, and at least zero(0) or more opCondition of describing operational conditions of  
descriptor.

15. The method according to claim 7, wherein anchor used for all Digital Items, eventReport, userPreference, reservedMetadata, and descriptor, is defined to include a reference being an identifier designating uniquely atomic Digital Item and each Digital Item, at least zero(0) or more descriptor for describing the anchor, and at least zero(0) or 5 more opCondition for describing usage format of the anchor.

16. The method according to claim 7, wherein eventReport is defined to include anchor for designating a server computer for processing, managing and storing the content of reportable event report, descriptor for describing the content of event report, and murCondition for describing conditions related to management and use rule of event 10 report content.

17. The method according to claim 7, wherein UserPreference is defined to include anchor for designating the existing user preference information, descriptor for describing the content of user preference information, and murCondition capable of 15 describing management and use rule of the user preference information..

18. The method according to claim 7, wherein murCondition used for all the 20 Digital Items, eventReport, userPreference, and reservedMetadata defines conditions for management and use rule of a corresponding Digital Item or definition model elements by use of at least one(1) or more predicate which is Boolean function representation language.

19. The method according to claim 7, wherein opCondition used for Digital Item 25 of component level, descriptor, anchor, choice and selection defines operational use

conditions for a corresponding item or definition model elements by use of at least one(1) or more predicate which is Boolean function representation language.

20. The method according to claim 19, wherein the opCondition describes  
5 conditions, for example transmission bit rate, resolution of video or image, sampling rate of audio, compression algorithm, key or decoding conditions if coded, transmission protocol, etc.

10 21. A method of generating Digital Item for electronic commerce activities of multimedia data, comprising the steps of:

selecting resource for electronic commerce activities of multimedia data; and

generating container, item and component as Digital Items in order to provide a selected resource as the unit of manipulation for electronic commerce activities according to the following element definitions:

15 (a)container::=(anchor | container)\* (anchor | item)\* descriptor\* murCondition\* eventReport\* userPreference\* reservedMetadata\*

(b)item::=(anchor | item | component)+ choice\* descriptor\* murCondition\* eventReport\* userPreference\* reservedMetadata\*

(c)component::=resource anchor descriptor\* murCondition\* opCondition\* eventReport\* userPreference\* reservedMetadata\*

20 (d) anchor::=reference descriptor\* opCondition\*

(e) descriptor::=(anchor | descriptor)\* (component | statement) opCondition\*

(f) choice::=choice\* selection+ descriptor\* opCondition\*

(g) selection::=predicate descriptor\* opCondition\*

25 (h) eventReport::=anchor descriptor murCondition

5

- (i) userPreference::=anchor descriptor murCondition
- (j) reservedMetadata::=anchor descriptor murCondition
- (k) murCondition::=predicate+
- (l) opCondition::=predicate+

22. The method according to claim 21, wherein '\*' means at least zero(0) or more, '+' means at least one(1) or more, and ' | ' means 'OR' logical operation.

10  
11  
12  
13  
14  
15

20

25

23